

FINANCIAL ASSISTANCE APPLICATION

FILE
COPY

DATE TO PROJECT OFFICER: 5/31/05

REMINDER >>> To avoid delays, please do the following:

>>>For Initial Award: Please **DO NOT** start your FR or CN until you receive an email notification from GMO.

For Amendment Award: There will be **NO email notification**; therefore, you can initiate the FR as soon as you receive the application from GMO.

TO:

Peter Kozelka

MAIL CODE:

WJR-3

CERTIFIED PROJECT OFFICER

☐ YES

☐ NO**

REFRESHED

CC:

(Supervisor)

FROM:

Clee

, Grants Specialist, PMD-7

APPLICANT

AZ SRQ

GRANT I.D.#:

CP-96941601-0

PROGRAM

Water Quality - Queen Creek
Copper TRNDL

The Grants Management Office (GMO) has received an original application for the above mentioned applicant. Your copy is attached for your review. Using IGMS, please prepare a Funding Recommendation (FR) and Commitment Notice (CN).



Project Officer Technical & Cost Review: The Division Directors approved a technical and programmatic checklist developed by the Grants Advisory Group (GAG). This checklist is to be completed during the review of each application (including work plan) for new awards and amendments that increase funding. A copy of the completed checklist or a similar documentation should be kept in the Project Officer Program File. The checklist is available on R9 Grants Database.



Filling out Your FR - Review and complete all questions. (See IGMS Help Topics instructions- R9 Grants Database)

Any specific requirements: include any specific programmatic condition(s) as applicable to your program/project.



FR and CN Routing: Electronically route the completed FR through Quality Assurance Program (and others, as applicable) and your immediate supervisor. Once the FR and CN have been finalized, **notify the Grants Specialist** listed above. For IGMS questions, call **Fareed Ali @ 2-3665, Renee Chan @ 2-3675 or Alba Espitia @ 2-3667.**

Arizona Department of Environmental Quality
Water Quality Cooperative Agreements/Grants Proposal
US EPA Region 9
Submittal in FY2005

Name of Project: Queen Creek Copper TMDL Investigation

Contact Information: Karen Smith, Director
Water Quality Division
Arizona Department of Environmental Quality
1110 West Washington
Phoenix, Arizona 85007
(602)771-2306; (602) 771-4634 (FAX)
smith.karen@azdeq.gov

Is this a continuation of a previously funded project?: This project is not a continuation of a previously funded project. ADEQ is currently fulfilling the requirements of two previous grant awards: the Alamo Lake Mercury TMDL and Lake Mary Region Mercury TMDLs. Updates on these projects are provided to EPA via teleconferences and quarterly exception reports. ADEQ has a solid track record of developing approvable TMDLs (e.g., Boulder Creek, Sonoita Creek, Luna Lake, Rainbow Lake and Oak Creek TMDLs).

Proposed Budget:

	<u>EPA Funding</u>
CONTRACTUAL	
Professional	
Modeling	\$ 75,000
Analytical	
Water samples	\$ 42,850
Sediment samples	\$ 12,300
SUPPLIES	\$ 11,700

Proposed Federal Funding:

Dollar amount requested from EPA: \$ 141,850

Cost Effectiveness

The timing of this TMDL investigation is good as a mining interest is planning to start mining on a copper-rich orebody that underlies the Queen Creek watershed. The mining interest has already met with the Arizona Pollution Discharge Elimination System (AZPDES) Unit regarding a permit to discharge a considerable volume of water into Queen Creek. While a potential economic boon to the area, the copper listings on Queen Creek could severely hamper the effort. The TMDL Unit and the AZPDES Unit will coordinate efforts to ensure that water quality standards are protected. Performing simultaneous copper TMDL investigations on the two listed segments of Queen Creek will lead to a more complete understanding of loading and effective implementation efforts that need to be taken. Development of a watershed loading model will create a tool that can be used in future assessments of implementation effectiveness.

Project Deliverables

The proposed project will result in the submittal of the Model Development report which will include existing loads, load capacities, draft allocations, and draft TMDLs for copper on the two listed segments within the Queen Creek watershed. ADEQ is committed to develop a TMDL report from the results in the Model Development report because these waterbodies are currently listed and because of the proposed mining operation. ADEQ is committed to developing a TMDL implementation plan with stakeholders.

Regional Setting

Queen Creek originates in the Superstition mountains in the Tonto National Forest, four miles north of Superior, AZ. It flows south through Queen Creek Canyon, continues through the town of Superior to the Broken Hills Property Company's (BHP's) Superior Mine NPDES permitted Waste Water Treatment Plant (WWTP) and then on to Potts Canyon. Previous sampling events have lead to the listing of the two segments of Queen Creek for copper exceedances: headwaters to Superior Mine WWTP (HUC# AZ05050100-014A) in 2002 and Superior Mine WWTP to Potts Canyon (HUC# AZ05050100-014B) in 2004.

Copper mining within the Queen Creek watershed began during the early 1870s. Magma Smelter, owned today by BHP, began smelter operation in 1924 and continued until the early 1970s. All milling operations have ceased. Seven tailings piles located in the vicinity of Superior have been identified as a source of heavy metal contamination in the Queen Creek drainage. Sediment and runoff from the tailing piles enters Queen Creek by way of an unnamed tributary. Tailings cover 207 acres and the total disturbed acreage from Superior Mine is approximately 512 acres. Copper, gold, limestone, silver, and perlite have been mined within the Queen Creek watershed. Currently, two mines continue to operate: OMYA Inc., an open-pit limestone mine; and, Harborlite Corporation, an open-pit perlite mine. Land uses include mineral exploration and development, grazing, historic preservation, and water resource development.

Project Description

Initial field work will involve field reconnaissance and historic records research. These activities will provide information about current environmental conditions, likely sources of copper loading, and optimal sites for sample collection. Reconnaissance and records research will commence in April 2005 before this scope of work starts. By July 2005, a Sample and Analysis Plan (SAP) will be developed to ensure that a credible body of data is collected which will support determination of the spatial and seasonal extent of impairment; source and critical condition identification; determination of loads, including anthropogenic and natural sources; and load allocation and TMDL calculation.

Monitoring to inform development of the SAP will start in April 2005 and in July 2005 monitoring in support of the SAP will be started. Because the listed portions of Queen Creek are intermittent, three autosamplers and accompanying stream stage loggers will be necessary to assist with sample collection during storm runoff events. The autosamplers and loggers will be stationed along Queen Creek to collect samples and measure flow stage at different times throughout the hydrograph. A weather station will be located in the upper watershed to collect data that can be used in conjunction with existing weather stations in precipitation modeling.

It is anticipated that a dynamic watershed loading model will be constructed to assist with load allocations, TMDL calculation, and scenario runs. A Task Assignment Statement of Work (TASOW) will be developed for professional modeling services. The selected Contractor will be tasked with preparing a Data Summary report, preparing a Model Selection report, developing and running the model, preparing a Model Development report, and participating in two public meetings. Two final TMDLs will be submitted to EPA following an extensive public comment period. Stakeholders will be identified and kept apprised of the project's progress as throughout this investigation.

Outcome/Result Tracking and Reporting:

The progress of the project will be tracked by completion the following tasks.

TASK #1 – CONDUCT MONITORING

Monitoring will include water column and sediment sampling. Water column samples will target collection at different flows, including baseflow and storm runoff, to measure copper loading as it responds to changes in the hydrograph. Spring samples will also be collected. Sediment samples will be collected to enhance the understanding of source contribution. Water column and sediment sample collection will be scheduled to allow for measurement of seasonal differences. Samples will be analyzed for inorganic parameters using traditional and ultra clean methods. Additional sampling techniques will be introduced as necessary.

TASK #2 – PURCHASE AND INSTALL AUTOMATED DEVICES

Construction of the weather station will take about a month. Installation of the autosamplers, stage loggers, and the weather station will take two weeks. The weather station and stage loggers will log data at fifteen minute intervals and require monthly maintenance and data downloads. Autosamplers will be coupled with stage loggers and programmed to collect samples at different points along the hydrograph. All deployed equipment will be marked with state property labels and secured with padlocks and cables.

TASK #3 – CONTRACT PROFESSIONAL MODELING SERVICES

It is anticipated that a dynamic watershed loading and water quality model is necessary to effectively identify the sources, mechanism(s) for loading, and allocate the loads needed for TMDL calculations. The Contractor will be tasked with preparation of a Data Summary report and a Model Selection report, developing the model, performing model runs, preparing a Model Development report, and assisting with two public meetings. The model runs may include runs at different flow events and runs which estimate the effect of proposed implementation strategies.

TASK #4 – COMMUNICATE RESULTS

ADEQ will activate the stakeholder process early in this project with much of the public outreach/participation process being handled by the Watershed Management Unit. The principal stakeholders include: BHP, Arizona State Land Department, U.S. Bureau of Land Management, Friends of Queen Creek, private land owners, and interested parties. A stakeholder meeting will be held after the Contractor has prepared the Data Summary and Model Selection reports. At this meeting, ADEQ and the Contractor will discuss the available dataset and explain possible modeling approaches. Another stakeholder meeting will occur after the Contractor has completed the Model Development report. At this meeting, ADEQ and the Contractor will discuss the development of the model including assumptions, calibration, validation, and results from scenario runs. All public meetings will be noticed in a newspaper of general circulation local to Queen Creek.

TASK #5 – SUBMIT DRAFT MODELING REPORT TO EPA
ADEQ will submit a copy of the Model Development report to the EPA.

Projected tasks, deliverables, and targeted completion dates

Task	Deliverable	Target Date
#1- Conduct Watershed Monitoring	Data collection	April 2005* - February 2007
#2- Purchase and Install Automated Devices	Purchase and Installment of Automated Devices	January 2006
#3- Contract Professional Modeling Services	Award Contract to Modeling Contractor	July 2006
#4- Communicate Results	Data Summary Meeting Model Report Meeting	January 2007 May 2007
#5- Submit Modeling Report to EPA	Modeling Report	June 2007

* This task will start before the proposed scope commences.

Outreach, Communication and Information Transfer:

A major component of the ADEQ TMDL program is stakeholder involvement. Primary stakeholders include BHP, Bureau of Land Management, and Arizona State Land Department. Stakeholders will be involved throughout the TMDL process beginning the reconnaissance and records research phase. As previously mentioned, at least two public meetings will be held to communicate with stakeholders. An additional meeting, to discuss the TMDL report, is likely and outside of the scope of this proposal. All public meetings will be noticed in a newspaper of general circulation near to Queen Creek. Meeting notices will also be posted on ADEQ's website where the current status of the TMDL process and key deliverables are posted for the public's review.

After this scope is completed, ADEQ will follow a lengthy public notice period as prescribed in Arizona Revised Statute §49-231. This process includes running an article regarding the availability of the TMDL in a newspaper of general circulation and 30-day public comment period following the notice. After completion of the 30-day notice, the loads and allocations and responses to comments received during the 30-day comment period will be posted in the *Arizona Administrative Register*. After this public notice phase is completed, the TMDL will be sent to the EPA for approval. The approved TMDL will be posted on the ADEQ's website.

ADEQ watershed coordinators will work closely with stakeholders to develop implementation plan that is will result in water quality standards being attained and maintained, is technically feasible, and cost effective. ADEQ watershed coordinators will assist stakeholders with identifying possible funding sources.



Janet Napolitano
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY

1110 West Washington Street • Phoenix, Arizona 85007
(602) 771-2300 • www.azdeq.gov



Stephen A. Owens
Director

May 19, 2005

Cynthia Lee
Grants Administration Section, PMD-7
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, CA 94105

Re: 104(b)(3) Queen Creek Copper TMDL

Dear Ms. Lee:

Enclosed for your consideration is the Arizona Department of Environmental Quality's new grant application for the above referenced program. This application requests federal funding of \$141,850. The project period is from July 1, 2005, to June 30, 2007.

A budget justification which includes budgeted categories is enclosed for your information and review.

If your staff has any questions, please contact Charles Graf for programmatic information at (602) 771-4661 or Joe Tuiteleapaga for budgetary information at (602) 771-7629.

Sincerely,

Stephen A. Owens
Director

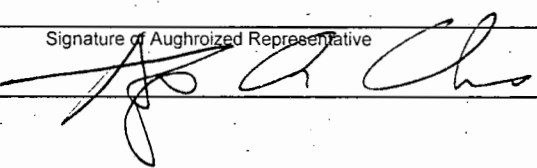
Enclosure

RECEIVED
MAY 27 2005
GMO, PMD-7

Northern Regional Office
1515 East Cedar Avenue • Suite F • Flagstaff, AZ 86004
(928) 779-0313

Southern Regional Office
400 West Congress Street • Suite 433 • Tucson, AZ 85701
(520) 628-6733

APPLICATION FOR FEDERAL ASSISTANCE

1. TYPE OF SUBMISSION Application <input type="checkbox"/> Construction <input type="checkbox"/> Construction <input checked="" type="checkbox"/> Non Construction <input type="checkbox"/> Non Construction		2. Date Submitted 11-May-05	Applicant Identifier
5. APPLICANT INFORMATION		3. Date Received By State	State Application Identifier
Legal Name Arizona Department of Environmental Quality		4. Date Received By Federal Agency	Federal Identifier
Organizational DUNS: 804-915-312		Organizational Unit Department Department of Environmental Quality	
Address: Street: 1110 West Washington Street		Name and telephone number of person to be contacted on matters involving this application (give area code) Prefix: Mr. First Name: Charles	
City: Phoenix		Middle Name: G	
County: Maricopa County		Last Name: Graf	
State: Arizona Zip Code: 85007		Suffix:	
Country: USA		Email Address: cgg@azdeq.gov	
6. EMPLOYER IDENTIFICATION NUMBER (EIN) 86-6004791		Phone Number: (give area code) 602-771-4661	Fax Number (give area code) 602-771-4834
8. TYPE OF APPLICATION: <input type="checkbox"/> New <input type="checkbox"/> Continuation <input checked="" type="checkbox"/> Revision If revision, enter appropriate letter(s) in Box(es) A. Increase Award B. Decrease Award C. Increase Duration D. Decrease Duration Other (Specify):		7. TYPE OF APPLICANT STATE Other (Specify):	
10 CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER TITLE: 104(b)(3) Queen Creek Copper TMDL		9. NAME OF FEDERAL AGENCY: Environmental Protection Agency, Region IX	
12 AREAS AFFECTED BY PROJECT (cities, counties, states, etc.) Statewide DE-OB \$'S		11 DESCRIPTIVE TITLE OF APPLICANTS PROJECT Queen Creek Copper TMDL	
13 PROPOSED PROJECT START DATE 7/1/2005 ENDING DATE 6/30/2007		14 CONGRESSIONAL DISTRICTS OF: a. Applicant 04 b. Project 01,02,03,04,05,06,07,08	
15 ESTIMATED FUNDING: a. Federal 141,850 .00 b. Applicant .00 c. State 0 .00 d. Local .00 e. Other .00 f. Program Income .00 g. TOTAL 141,850 .00		16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS? A. YES THIS PREAPPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE: B. NO <input checked="" type="checkbox"/> PROGRAM IS NOT COVERED BY E.Q. 12372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW	
18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT. THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.		17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT? YES If "Yes" attach an explanation. NO <input checked="" type="checkbox"/>	
A. Authorized Representative			
Prefix Mr. First Name Stephen Middle Name A.		Last Name Owens Suffix	
B. Title Director		C. Telephone Number (give area code) 602-771-2203	
D. Signature of Authorized Representative 		E. Date signed 5/19/05	

Standard Form 424 Rev. 9-2003
Prescribed by OMB Circular A-102

BUDGET INFORMATION - Non Construction Programs**SECTION A - BUDGET SUMMARY**

Grant Program Function Or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated funds			Federal (e)	Non-Federal (f)	Total (g)
		Federal (c)	Non-Federal (d)				
1 FY 06	66-463						
2							
3							
4 State Match							
5 TOTALS							

SECTION B - BUDGET CATEGORIES**GRANT PROGRAM, FUNCTION OR ACTIVITY**

6 Object Class Categories			GRANT PROGRAM, FUNCTION OR ACTIVITY			
				Total Federal	State Match	Federal & State Total
	FY 06 (1)	(2)				
				(3)	(4)	(5)
a. Personnel						
b. Fringe Benefits						
c. Travel						
d. Equipment						
e. Supplies	11,700			11,700		11,700
f. Contractual	130,150			130,150		130,150
g. Construction						
h. Other Field Supplies						
i. Total Direct Charges (sum of 6a-6h)	141,850			141,850		141,850
j. Indirect Charges						
k. TOTALS (sum of 6i and 6j)	141,850			141,850		141,850
7. Program Income						

SECTION C - NON FEDERAL RESOURCES

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) TOTALS
8. State Match Base grant				
9.				
10.				
11.				
12 TOTALS (sum of lines 8 and 11)				

SECTION D - FORECASTED CASH NEEDS

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13 Federal	141,850	56,740	28,370	28,370	28,370
14 Non Federal					
15 Total (sum of lines 14 and 24)	141,850	56,740	28,370	28,370	28,370

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) Grant Program	PAST FUNDING PERIODS (Years)			
	(b) First	(c) Second	(d) Third	(e) Fourth
16.				
17.				
18.				
19.				
20 TOTALS (sum of lines 16-19)				

SECTION F - OTHER BUDGET INFORMATION

(ATTACH ADDITIONAL SHEETS IF NECESSARY)

21. Direct Charges:	See detailed budget justification pages. (attached)	22. Indirect Charges: 0.5054 of Personnel and Fringe.
23. Remarks:		

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SF 424 A (4-88) Page 2
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104(b)(3) Queen Creek Copper TMDL
BUDGET PERIOD 7-1-2005 THRU 6-30-2007
BUDGET JUSTIFICATION

	FY 06	Total Federal \$s	State Match	FY 06 Total
Personnel Costs				
Fringe Benefits Fringe Benefits are computed at 30.00%				
Travel Out-of-State				
In-State Instate travel cost based on State authorized mileage and perdiem rate.				
Equipment See Equipment Summary Page				
Supplies Funds will be used to pay for non-capitalized equipment, training, maintenance and supplies during the grant period.	11,700	11,700		11,700
Contractual See separate contractual list.	130,150	130,150		130,150
Indirect The indirect cost rate for the Dept of Env Qual is based on the FY 06 rate of 50.54%				
Total	141,850	141,850		141,850

**104(b)(3) Queen Creek Copper TMDL
BUDGET PERIOD 7-1-2005 THRU 6-30-2007**

EQUIPMENT LIST

Section	Description	Cost	Quantity	Sub-Total	Section Total
WQD Director 61000 <u>Total for Dir</u>					
Water Permits 62000 <u>Total for Perm</u>					
Compliance 63000 <u>Total for Compl</u>					
Drinking Water 64000 <u>Total for DW</u>					
Hydrology 65000 <u>Total for Hydro</u>	Stage Loggers Autosamplers	1,000 2,900 3,900	3 3	3,000 8,700 11,700	 11,700
Planning 66000 <u>Total for Plng</u>					
NRO 41000 <u>Total for NRO</u>					
SRO 51000 <u>Total for SRO</u>					
	WQD Equipment Total				11,700

**104(b)(3) Queen Creek Copper TMDL
BUDGET PERIOD 7-1-2005 THRU 6-30-2007**

CONTRACTS LIST

Section	Description	Type of Contract	Base Contract Amount	Section Subtotal
WQD Director 61000				
	Sub-Total			
Water Permits 62000				
	Sub-Total			
Compliance 63000				
	Sub-Total			
Drinking Water 64000				
	Sub-Total			
Hydrology 65000	Professional: Modeling	Competitive	75,000	75,000
	Analytical:			
	Water Samples	Competitive	42,850	42,850
	Sediment Samples	Competitive	12,300	12,300
	Sub-Total		130,150	130,150
Planning 66000				
	Sub-Total			
NRO 41000				
	Sub-Total			
SRO 51000				
	Sub-Total			
WQD Contracts Total			130,150	130,150

FY06 WORKPLAN

GOAL #1: Clean & Safe Water Program #4610: WQ Assessment - GW/SW Objective #3: Protect and improve water quality on a watershed basis – number of Arizona's watersheds where: water quality standards are met in at least 80 percent of the assessed water segments; all assessed water segments maintain their quality and at least 20 percent of assessed water segments show improvement above conditions as of 2002.			
TASK/ GRANT	OUTPUT DESCRIPTION	EVALUATION, DATE OR QUANTITY T=TARGET A=ACTUAL	RESPONSIBLE SECTION/ STAFF
1.3.16	TASK: TMDL Analyses Oversee Total Maximum Daily load (TMDL) efforts and conduct TMDLs and related analyses. DELIVERABLES:		
NPS Impl VI/VII	1) TMDL projects in modeling phase a) Pinto Creek – headwaters to Ripper Spring (Cu); and Pinto Creek - Ripper Spring to Roosevelt Lake (Cu) i) stakeholder participation ii) complete site specific standard modeling iii) prepare justification for site specific standard iv) adoption of site specific standard v) complete TMDL modeling vi) draft TMDL report vii) public notice/response period viii) submit TMDL report to EPA for approval	T = i) ongoing ii) 6/05 iii) 8/05 iv) 6/06 v) 9/05 vi) 2/06 vii) 6/06 viii) 6/06	Hydrology
	b) Mule Gulch – headwaters to Above Lavendar Pit (Cd, Cu, pH, Zn); and Mule Gulch - Above Lavendar Pit to WWTP Bisbee (Cu, Cd, pH, Zn); and Mule Gulch - WWTP Bisbee to Highway 80 Bridge (Cu, Cd, pH, Zn) i) stakeholder participation ii) continue collecting background samples iii) complete site specific standard modeling iv) prepare justification for site specific standard v) complete TMDL modeling	T = i) ongoing ii) ongoing iii) 2/06 iv) 4/06 v) 5/06	Hydrology

FY06 WORKPLAN

GOAL #1: Clean & Safe Water Program #4610: WQ Assessment - GW/SW			
Objective #3: Protect and improve water quality on a watershed basis – number of Arizona's watersheds where: water quality standards are met in at least 80 percent of the assessed water segments; all assessed water segments maintain their quality and at least 20 percent of assessed water segments show improvement above conditions as of 2002.			
TASK/ GRANT	OUTPUT DESCRIPTION	EVALUATION, DATE OR QUANTITY T=TARGET A=ACTUAL	RESPONSIBLE SECTION/ STAFF
1.3.16	TASK: TMDL Analyses (Cont'd) DELIVERABLES:		
Queen Creek	2) NPDES 104(b)3 Grants a) FY03/04 – Bill Williams Watershed (Alamo Lake) TMDL (Hg) i) perform water quality sampling ii) calculate TMDL iii) draft TMDL report iv) public notice/response period v) submit TMDL report to EPA for approval b) FY04/05 – Lake Mary Regional TMDLs (Hg in 4 lakes) i) commence model development ii) complete surface water sampling iii) calculate TMDL, load allocations and reductions iv) draft TMDL report v) public participation vi) submit final TMDL to EPA for approval	T = i) ongoing ii) 9/05 iii) 10/05 iv) 2/06 v) 3/06 i) 7/05 ii) 12/05 iii) 1/06 iv) 5/06 v) ongoing vi) 10/06	Hydrology
	c) FY05/06 – Queen Creek Copper TMDL (Cu) i) Conduct Watershed Monitoring 1) Conduct reconnaissance to inform SAP 2) Conduct surface water and sediment sampling ii) Complete sampling and analysis plan iii) Purchase and install automated devices iv) Public participation v) Contract professional modeling services 1) Issue TASOW 2) Award contract vi) Communicate results 1) Data Summary meeting 2) Model Report meeting vii) Submit Modeling Report to EPA	i) 1) 6/05 2) through 2/07 ii) 6/05 iii) 1/06 iv) through 6/07 v) 1) 7/06 2) 9/06 vi) 1) 1/07 2) 5/07 vii) 6/07	

FY06 WORKPLAN

GOAL #1: Clean & Safe Water Program #4610: WQ Assessment - GW/SW			
Objective #3: Protect and improve water quality on a watershed basis – number of Arizona's watersheds where: water quality standards are met in at least 80 percent of the assessed water segments; all assessed water segments maintain their quality and at least 20 percent of assessed water segments show improvement above conditions as of 2002.			
TASK/ GRANT	OUTPUT DESCRIPTION	EVALUATION, DATE OR QUANTITY T=TARGET A=ACTUAL	RESPONSIBLE SECTION/ STAFF
1.3.16	TASK: TMDL Analyses (Cont'd)		
	DELIVERABLES:		
	3) TMDL projects in monitoring phase a) Queen Creek – headwaters to Superior Mine WWTP (Cu); and Queen Creek – Superior Mine WWTP to Potts Canyon (Cu) i) perform recon/historic data review ii) commence stakeholder coordination iii) draft TMDL SAP iv) perform water quality sampling	T = i) 6/05 ii) 5/05 iii) 6/05 iv) through FY	Hydrology
	b) Slide Rock State Park pathogen TMDL phase II (E.coli) i) stakeholder coordination ii) perform water quality monitoring iii) optical brightener study * iv) microbial source tracking *	T = i) ongoing ii) through FY iii) 6/05 * iv) 6/06 *	
	c) Lyman Lake (Hg) i) continue recon/historic data review ii) draft TMDL SAP iii) perform water quality sampling	T = i) 10/05 ii) 12/05 iii) through FY	
	d) LCR – Silver Creek to Carr Wash (E.coli) i) draft TMDL SAP ii) perform water quality sampling	T = i) 10/05 ii) through FY	
	e) San Pedro – Mexico border to Charleston (Cu) i) perform recon/historic data review ii) commence stakeholder coordination iii) draft TMDL SAP iv) perform water quality sampling	T = i) 6/05 ii) 5/05 iii) 6/05 iv) through FY	
	f) San Pedro – Babocomari Creek to Dragoon Wash (E. coli) i) perform recon/historic data review ii) commence stakeholder coordination iii) draft TMDL SAP iv) perform water quality sampling	T = i) 6/05 ii) 5/05 iii) 6/05 iv) through FY	
	g) Cave Creek – headwaters to South Fork Cave Creek (Se) i) perform quarterly water quality sampling	T = 6/06	

* contingent on funding by 104(b)(3) grant for FY05-06

FY06 WORKPLAN

GOAL #1: Clean & Safe Water Program #4610: WQ Assessment - GW/SW Objective #3: Protect and improve water quality on a watershed basis – number of Arizona's watersheds where: water quality standards are met in at least 80 percent of the assessed water segments; all assessed water segments maintain their quality and at least 20 percent of assessed water segments show improvement above conditions as of 2002.			
TASK/ GRANT	OUTPUT DESCRIPTION	EVALUATION, DATE OR QUANTITY T=TARGET A=ACTUAL	RESPONSIBLE SECTION/ STAFF
1.3.16	TASK: TMDL Analyses (Cont'd) DELIVERABLES:		
	4) Pre-TMDL activities for: a) San Pedro – Aravaipa Creek to Gila River (E. coli, Se) i) perform reconnaissance ii) perform water quality sampling	T = i) through FY ii) through FY	Hydrology
	b) Santa Cruz River – Mexico Border to Nogales (E. coli) i) perform reconnaissance ii) perform water quality sampling	T = i) through FY ii) through FY	
	c) Gila River – Bonita Creek to Yuma Wash (E. coli) i) perform reconnaissance ii) perform water quality sampling	T = i) through FY ii) through FY	
	5) Long-term TMDL projects a) Little Colorado River – Porter Tank to McDonalds Wash (Cu, Ag, SSC) i) Update TMDL SAP to include SSC ii) Perform water quality sampling b) Verde River – headwaters to Horseshoe Reservoir (N, P) i) Receive USGS GW/SW report ii) research data collected and studies completed since completion of assimilative capacity study iii) develop workplan to update assimilative capacity study c) Gila pesticide investigation - *numerous segments (numerous parameters) i) Perform workplan activities d) Mercury – Air equipment monitoring support	T = i) 10/05 ii) through FY i) 10/05 ii) 12/05 iii) 3/06 i) through FY T = through FY	Hydrology

FY06 WORKPLAN

GOAL #1: Clean & Safe Water Program #4610: WQ Assessment - GW/SW			
Objective #3: Protect and improve water quality on a watershed basis – number of Arizona's watersheds where: water quality standards are met in at least 80 percent of the assessed water segments; all assessed water segments maintain their quality and at least 20 percent of assessed water segments show improvement above conditions as of 2002.			
TASK/ GRANT	OUTPUT DESCRIPTION	EVALUATION, DATE OR QUANTITY T=TARGET A=ACTUAL	RESPONSIBLE SECTION/ STAFF
1.3.16	TASK: TMDL Analyses (Cont'd) DELIVERABLES:		
PPG	6) Targeted monitoring activities a) Beaver Turbidity/SSC Project i) install monitoring equipment ii) perform targeted monitoring b) Nutrioso Creek TMDL effectiveness monitoring (Turb/SSC) i) continue effectiveness monitoring ii) determine current turbidity/TSS relationship iii) determine relationship between SSC/TSS/turbidity iv) draft geomorphologic changes seen during period of effectiveness monitoring v) draft effectiveness evaluation c) Hassayampa River targeted monitoring (Cd, Cu, pH, Zn) i) collect summer storm samples ii) collect spring snowmelt samples d) Lynx Creek area targeted monitoring (core parameters) i) core parameter sampling	T = i) 10/06 ii) through FY i) 10/05 ii) 10/05 iii) 10/05 iv) 12/05 v) 6/06 i) 9/05 ii) 3/06 i) through FY	Hydrology
PPG	7) Hold teleconferences with EPA Region IX TMDL staff.	T = Monthly	Hydrology
	8) Continue inter-agency and inter-state TMDL project and targeted monitoring coordination. Coordinate activities with surrounding states, National Forest Service, and Bureau of Land Management to identify where scheduled stream remediation activities can be tied to impaired waterbodies and/or Planning List (Part 3) waterbodies.	T = Ongoing	Hydrology
	9) Prepare TMDL progress report per 49-236. a) draft b) final	T = a) 7/05 b) 8/05	

FY06 WORKPLAN

GOAL #1: Clean & Safe Water		Program #4610: WQ Assessment - GW/SW	
Objective #3: Protect and improve water quality on a watershed basis – number of Arizona’s watersheds where: water quality standards are met in at least 80 percent of the assessed water segments; all assessed water segments maintain their quality and at least 20 percent of assessed water segments show improvement above conditions as of 2002.			
TASK/ GRANT	OUTPUT DESCRIPTION	EVALUATION, DATE OR QUANTITY T=TARGET A=ACTUAL	RESPONSIBLE SECTION/ STAFF
1.3.16	TASK: TMDL Analyses (Cont’d) DELIVERABLES:		

FTE FUNDING SOURCE	MONTHS	AMOUNT
GF	13.10	52,219
ST 319(h) NPS Impl. VII	9.00	29,718
ST 319(h) NPS Impl. VI	4.00	15,483
PPG	39.50	122,272
WQARF 319(h) NPS Impl. VII	1.00	2,992
WQARF 104(b)(3) Lake Mary TMDL	3.00	8,975
319(h) NPS Impl. VII	41.50	127,327
319(h) NPS Impl. VI	43.50	149,492
Total	154.60	508,478
* Contract: Mercury TMDL grant		